

# **Application of Criteria and Indicator for Sustainable Ecotourism: Scenario under Globalization**

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## **Abstract**

In present era of globalization and modernization there is growing concern of indigenous knowledge and the resource management especially in the case of CPR, indigenous people and associated development activities. On the name of developmental projects many irreversible negative impacts has been identified on the environment like species extinction, destruction of natural resources, loss of traditional knowledge of the indigenous tribal people etc. Particularly the Indigenous Peoples are becoming increasingly vulnerable to exploitation on the name of development activities, where traditional wisdom and knowledge and natural resources have been expropriated for business interests. These are serious concern for the survival of present world communities.

Recently Ecotourism has emerged as development tool, which aims to protect the natural environment and cultural diversity by attracting the ecotourist and generating the source of revenue for the local people without harming the nature. This has been supported by various global processes These processes has agreed to resolve the crucial problems related to indigenous people, their ownership rights and conservation of natural resources by clearer understanding and recognition of the strong ethical and spiritual dimensions and survival spirit of Indigenous Peoples in the changing world where Ecotourism can prove supportive as it works at local scale and incorporates land-scape and people-scape in particular.

The success of ecotourism activities at an operational level depends upon an array of factors owing to its nature. Ecotourism can be the thin edge of a wedge, which opens the door to mass tourism and has every possible scope to be used by general tourism practitioners as brand name. This very concept could be misused to fulfill their economic motives. Scope of implementing certification concept is strong in the process of sustainable development of Ecotourism. Therefore, there is need to develop an applied tool to measure threshold of tourism impacts and change in socio-economic and environmental status of the site through Criteria and Indicator (C & I), under the framework of sustainability. The development of C&I is not an end in itself, it is a continuous process which encompasses the societies responsibility for sustainable livelihood generation through community based Ecotourism without environmental degradation and erosion of cultural values.

Implementing C & I in the field, in particular requires community participation in CPRs management to gain the understanding and support of the local people, so that they can respect and contribute to conservation of the natural resources to keep its environmental value intact. Under this purview, C & I has been developed with participation of the local people at village level by using PRA techniques and organizing field level workshops. The research finding has been used to test the ecotourism performance at two study areas in Sikkim, India. Under this study, various results have been achieved in social, economic and ecological dimensions. In one of the study area the environmental and cultural values are intact because the indigenous people have developed a sense of belongingness, environmental awareness and worked collectively to maintain nature. They have developed local level institutions, which keeps an eye on the process of ecotourism development and share their experiences to make others aware. While in the other site, the local community involvement is negligible and could be linked with globalization. The results shows that due to economic motive and less involvement of local community in the

process of Ecotourism, the area is leading towards environmental degradation and erosion of cultural values and is further prone to serious threat of migration of the local community.

### **Background:**

Undoubtedly, environmental politics has risen to the top of the global agenda. Tourism supposedly the world's biggest industry, is another global focal point. The result is ecotourism, which is increasingly introduced in Third World Countries in form of a development package, involving capital, expertise technology and management systems, and is thus becoming something like a new green revolution.

However these recent trends in tourism development schemes –projected as sustainable, nature based, soft, green and ecotourism ventures has generated considerable public debate and concern due to their potential serious implications on nature and society, particularly in southern countries.

There are well-founded concerns that eco-tourism lacks adequate scientific foundations and is therefore not well equipped to arrive at sustainable and practicable solutions to the global social and environmental crisis. The World Bank for example has funded a growing number of biodiversity programmes including an eco-tourism component, although there is little evidence that it has the in-house expertise and means to develop a concrete policy in that field (Wells M and Brandon K. 1992; UNEP/UNDP/The World Bank. 1993).

Many of the claims concerning the benefits of ecotourism have been exaggerated, or owe more to labeling and marketing, as such projects are often planned and carried out without local support, and indeed threaten rather than benefit local peoples cultures, their subsistence economies and life sustaining natural resource base. It is because of this that critics regard ecotourism more as an 'eco-façade' and as a tactic to conceal the consumptive and exploitative practices of the mainstream tourism industry – by greening it (Fernandes 1994, Munt 1994, Pholpoke 1994, Pleumarom 1994, Tujan 1995).

It is also clear that just as with traditional mass tourism, the tremendous growth of eco-tourism has not been matched with official efforts to adequately plan, implement and monitor development through administrative and legal mechanisms. Like wise, in most countries adopting eco-tourism policies, the infrastructure for research and education concerning predictive impact assessments, control regulations and risk containment are deficient or non-existent. Hence, there is no base for the blanket claim that ecotourism schemes can be properly planned and managed in foreseeable future.

Ecotourism was initiated in Sikkim during the "Biodiversity and ecotourism project" in the year 1995-1998. Yuksam in West Sikkim was the project site for the same. Where local people were sensitized regarding the environmental conservation. The project has shown positive impact on the environmental and socio-cultural system of the place. However ecotourism in Sikkim is under grave threat as the number of visitors to Sikkim has increased 10-fold in the past two decades. Ecotourism in the Yuksam-Dzongri trail corridor and surrounding area has been facing immense pressure on its natural resources because of an increase in the numbers of tourists in the Khangchendzonga National Park. The study found that forests remains undisturbed on the steeper slopes and degradation increased near the settlement and tourist campsites where interference was more pronounced. It was observed that firewood and fodder resources were generally extracted from forests that are easily accessible.

The use of criteria and indicators of sustainable development have been acknowledge and recommended by the United Nations (CSD) as important tools for use in measuring the status of management of sustainable development. These C&I are intended as standard measurements of sustainability, and for broad applications in various areas and disciplines throughout the world. Development of the C&I can lead to greater understanding of the complex interplay between the

long-term ecotourism activity in a protected area as it relates to sustainable social development, environmental management and biodiversity conservation

Ecotourism has strong correlations with sustainable tourism, which contains economic, ecological, social and cultural dimensions to be assessed and this requires to develop Criteria and Indicators (C&I) in all respects. These C&I should be multidisciplinary, covering all aspects of social, environmental, ecological, cultural, economic and institutional factors affecting sustainable ecotourism in this national park (Hammond et al 1995, cited in Abidin 1999).

A Criterion is a second order principle that adds meaning and operationality to a principle without itself being a direct measure or information the system, which is used to infer the status of a criterion. Criteria are an aspect that is considered important by which sustainable ecotourism may be assessed. A criterion is accompanied by a set of related indicators. Indicator, on the other hand is a quantitative, qualitative or descriptive attribute that, when periodically measured or monitored, indicates the direction of change. A verifier, finally is a data or information, which provides specific details or measures that, enhances the case, specificity or precision of assessment of an indicator.

There was a need felt to develop standard method which can track the changes in social natural, cultural, economic and political arenas at Yuksam. Therefore there is a need to develop destination level sustainability criteria – centered ecotourism indicators based on their policy relevance, analytical soundness measurability. This paper attempts to assess sustainable development of ecotourism for Yuksam through the documentation of suitable criteria and indicators of sustainable ecotourism.

### **Objectives of the Study**

The study was carried out with the objective of the following -

1. To develop destination level Criteria and Indicator for Sustainable Ecotourism with respect to the study area and the development of guidelines for measuring the indicator with respect to the study area.
2. To explore sustainable tourism practices that conserve natural and cultural heritage and provide income-generating activities in the tourism sector so as to contribute to poverty alleviation of mountain populations.

### **Study Area**

Sikkim, one of the high biodiversity regions of India with cultural heterogeneity and distinctive ethnic groups has been selected for case study. Along with this the state has also some attractions like, snow-capped mountains, blooming valleys, rolling rivers, sacred lakes, monasteries, which attract large number of tourists in the peak season from April to June and from October to December at some of its attractions.

Extending approximately 114 km from North to South and 64 km from East to West, it is a very small State in the Eastern Himalayas. But very rich in biodiversity and attractive natural landscape, the entire region is endowed with natural flora and fauna, is a paradise for nature lovers, conservationists, botanists, zoologists and environmentalists. There are about 4500 species of flowering plants, 362 species of ferns and its allies, 11 species of oaks, 9 species of tree ferns, 30 species of Primulas and 20 species of bamboo's. In fauna, the state is also very rich, 144+ species of Mammals, 550 species of birds, over 600 species of butterflies and many times more of moths. Many species of reptiles and amphibians are available.

Yuksam in West Sikkim in the northern part of India happens to be a region of sensitive Eco-region in the country. It speaks of an area, which has been declared as a biosphere reserve for its natural heritage. The significance of the region gained its prominence by the significant

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gateway entry to Khangchendzonga Mountain and its ecosystem, the world's third highest mountain. The alpine mountain ecosystem gains its altitude from 5100 feet (1700 Mt.) at which Yuksam is situated to 14000 ft. (4000Mt.) base altitude of the mountain. Sikkim has one national park and four wildlife sanctuaries, accounting for 13% of its total land area (Rodgers and Panwar 1988). The proposed initiatives to increase protected areas in the state can bring in an unique semblance which is unparalleled in the world since it would increase the land cover of such measure to about 30%. Yuksam in its embrace has the honor of the only national park if the state "Khangchendzonga National Park", which with its surrounding area in the periphery has been declared a biosphere reserve increasing its importance and sensitive ranking on the Eco-region profile of the world as well.

Yuksam including the region of YUKSAM present a rich mix of temperate, sub-alpine and alpine conglomeration of vegetative, wild fauna, bird life along with sights of natural beauty which holds back Yuksam in awe. The forest type varies from the temperate broad-leafed in the lower reaches to the mixed coniferous forest in the middle and alpine shrubs at the high altitudes.

*Temperature Vegetation:* In the lower altitude of 600-9000 ft. as observed *Quercus* and *Castanopsis* species becomes the dominant in the forest.

*Sub-Alpine Vegetation:* the mixed coniferous forest covers between an altitude of 9000-13500 ft. tree species of *Abies densa*, *Salix sikkimenes*, *Acer sp.* *Larix griffithiana*, *P. spinulosa*, *Tsuga dumosa*, *Cedrus deodara*, *Pinus roxburghi*, *Pinus wallichiana*. Further more as the altitude increases *Rhododendron arboreum*, *r.skimenso*, *R.dalhousiae*, *R.trifloram*, *R.barbatum*, *r. campanulatum*, *R. campylocarpum* etc. are found prominently. A good vegetative study and analysis of species varieties and its extraction can be studies while on a trail from Yuksam through Dzongri to Thangsing.

Alpine Vegetation: beyond an altitude of 13000 ft. the dominance of vegetation is mainly of dwarf varieties of rhododendron spp. and Juniperus spp. This alpine region has comparatively less diversity of floral species like that of Juniperus communis, J. squamata, J. india, Salix sikkimensis, R. anthopogon, R. nivala, R. vaccinioides, R. cillatum. The alpine has a rich presence of primula spp.

The ecoregion beyond Yuksam, leading to and beyond in the passageway to KNP/YUKSAM region is a wild enriched habitat for rare endangered and critically threatened species as snow leopard (*Uncia uncia*), clouded leopard (*Neofelis nebulosa*), Argali sheep (*Ovis ammon hodgsoni*), Red panda (*Ailurus fulgens*), and Satyr trapopn (*Tragopan satyra*) among many other.

#### *Socio-economic Profile*

It has cluster of 350 households of about 2000 families. People belong to this place are from the Bhutia tribes. The society reflects mostly an agrarian society (50%) along with employment in various government agencies. The importance remains with the families comprising about 10-15% of the village, who serve as porters, pack animal operators, guides, trek cooks etc. serving the interests of tourists as local Eco-tourism service providers (here after referred to as ESP's). The activities as ESP's of the Yuksam populace is quite wide-ranging if taken onto the consideration the direct and indirect socio-economic benefits and interests related to the flow of tourist.

#### *Religious belief system*

Kathok and Khecheopalri lakes are two important lakes in this area. Khecheopalri known as 'wishing lake' is one of the most sacred lakes of Sikkim. On the 15<sup>th</sup> day of the first month of the Tibetan calendar a big puja (worship) is organized by the monk of Khecheopalri monastery and the community of Khecheopalri village in order to persuade the lake deities to avert diseases and natural calamities and personal harm. This festival attracts thousands of devotees from all over

Sikkim, Darjeeling, Bhutan and Nepal. Khecheopalri lake was originally at Yuksam, and people dumped carcass of donkey, dogs and other dirty things, polluting the lake and hence destroying its sanctity. The deities of Khecheopalri Lake got annoyed and sifted to the current location at Khecheopalri.

### **Yuksam: An Ecotourism Destination**

Tourism in Yuksam happened since 1960, but the actual influence of visitors to that region happened since the restrictions were lifted for domestic and international tourists. Since 1990 the trend of tourists and visitors are increasingly every year. The corridor of Yuksam creates a passageway for high altitude trekking as well as a beautiful network of important tourist sites around its geographic realm. The visitors to that place can have a base at Yuksam and visit the places around of ancient cultural and monumental importance making Yuksam a destination for moderate and highly adventurous tourists both.

The month of April-May brings in the flowering season in the YUKSAM region. The spontaneous floral attributes of the region along with rare orchid species, rhododendron species and wide variety of other eastern Himalayan flora promotes the sites along the high altitude (6000 to 16500) ft. trails a rare and charming experience of observing such rare variety of floral tapestry in its natural state. Though not to be ignored are the rich presence of many sub-alpine and alpine Ave fauna species. The bird life in itself becomes a joyful sighting and can bring in attraction in some sight specific activity as part of Eco-tourism promotion.

### **Methodology:**

A descriptive cross sectional research design was used for the study comprising of questionnaire surveys and group discussions with the different stakeholders to Ecotourism in the study site. Questionnaire surveys were conducted with Ecotourism Service Providers (like guides, animal operators, trek cook and porters), hotel and lodge operators and teak shopkeepers and foreign and Indian tourists. Semi structured informal interviews with members of Khangchendzonga Conservation Committee. Apart from the above the Workshop Methodology was focussed upon for the final destination level Criteria and Indicators. Informal interactions were also conducted with 'homestay' representatives, village youth. Visits were also made to the police checkpost for collecting data on International and Domestic tourists. Transect walks were conducted at the ecotourism sites at Yuksam and Peiling for gauging the level of impact of ecotourism in these areas.

In the workshop for developing C&I, participants from different parts of Sikkim and representing community based NGOs working in the field of ecotourism development and conservation, students, forest department personnel, JFM and EDC members and local community members from the nearby villages. During the course of the workshop the first the set of Criteria was developed which was followed by re development of indicators for each of the Criterion earlier developed.

The study however has its limitations in the sense that it is yet to be tested in the field over a longitudinal study. The findings from this case study may also not be applicable in other parts of the globe as the socio-cultural situation in the state of Sikkim of India is rather unique to the region and may find its replicability within India a non-feasible proposition. Despite its limitations the study does provide some useful insights on some community opinions towards ecotourism.

### **Result and Discussions:**

#### **Criteria 1: Maintenance of Healthy Ecosystem of Yuksam**

This criterion refers to the maintenance of the healthy ecosystem of YUKSAM Park, which has been notified as biosphere reserve on 7<sup>th</sup> February 2000 by the ministry of Environment and

Forest. With an area of 2129 Sq. km, this park lies between the lowland of Yuksam (1780 m) to mountain Khangchendzonga (8586m) and present wide variety of flora, fauna and avifauna. Where the Yuksam-Dzongri corridor creates a passageway for high altitude trekking as well as a beautiful network of important tourist sites around its geographic realm. Since last two decades it has experienced huge number of tourists in this region. Along with tourism the people of this region are highly dependent on the forest resources like cardamom cultivation, NTFP collection, food and fodder and grazing of their yak and other animals. Certain use of fuel wood and overgrazing in

Criteria	Indicators	Monitoring Methods
Maintenance of Healthy Ecosystem	<ul style="list-style-type: none"> <li>Increased number of wildlife animal citing</li> <li>Availability of water sources in wild, availability of live streams</li> <li>Number of lakes and sacred groves and monasteries around</li> <li>Occurrence of weeds in the area</li> <li>No. of rainy days and amount precipitation</li> <li>Availability of Indigenous species</li> <li>Availability of Rhododendrons and Juniper</li> <li>Citing of avifauna (number of migratory birds)</li> <li>Availability of endangered / threatened plants</li> <li>Level of soil erosion</li> <li>Status of natural regeneration</li> </ul>	<ul style="list-style-type: none"> <li>Interview with local people and tourist</li> <li>Observations over time, transect walk</li> <li>Interviews</li> <li>Transects</li> <li>Records</li> <li>Observation, surveys</li> <li>Transect, vegetation sampling</li> <li>Transect, vegetation sampling</li> <li>Transect, vegetation sampling</li> <li>Transect, vegetation sampling</li> <li>Transect, vegetation sampling</li> </ul>

## 2. Criteria 2: Conservation of Cultural Heritage:

For eco-tourism to claim that it preserves and enhances local cultures is highly disingenuous. Ethnic groups are increasingly seen as major asset, an exotic backdrop to natural scenery and wildlife. What has been in general ignored is the fact that the very same people have often been the targets of consistent policy of suppression and exploitation by the dominant social groups in nation states. The simultaneous romanticisation and devastation of indigenous cultures is certainly one of the deepest ironies manifest in eco-tourism.

Criteria	Indicators	Monitoring Methods
Conservation of cultural Heritage	<ul style="list-style-type: none"> <li>Popularity of local food, traditional dresses and language</li> <li>Involvement of the local people / local cultural committees at decision making level</li> <li>Number and types of activities associated with Monastery and Temple</li> </ul>	<ul style="list-style-type: none"> <li>Observation, interview</li> <li>Village surveys, photo, records</li> <li>Interview</li> </ul>

	<ul style="list-style-type: none"> <li>• Number of ethnic festival and dance organized at community level.</li> <li>• Availability of traditional / local food</li> <li>• Promotion of local handicraft</li> <li>• Number of Local artisan used</li> <li>• Use of local traditional games (archery, parasol baghal etc)</li> <li>• Receptability of local community to visiting tourist</li> </ul>	<ul style="list-style-type: none"> <li>• Interview, records</li> <li>• Interview, records</li> <li>• Interview, records</li> <li>• Interview, record of payment</li> <li>• Record, interview</li> <li>• Books of records, interview of operators, agents</li> </ul>
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### 3. Criteria 3: Enabling Environment for Ecotourism Promotion

Development and management of ecotourism requires conducive environment, which can facilitate its development from paper to the plane. This criterion addresses the general institutional requirements that are necessary to make sustainable ecotourism management possible. Taken together, the information gathered indicates the extent of political commitment to sustainable ecotourism development and management. Most of them cover the legal and institutional frameworks and are mainly descriptive in nature. This also requires proper infrastructure, skilled manpower, and good administrative environment right from the planning level to its implementation.

Criteria	Indicators	Monitoring Methods
Enabling Environment for Ecotourism Promotion	<ul style="list-style-type: none"> <li>• Availability of Ecotourism policy</li> <li>• Involvement of the local people at decision making level</li> <li>• Availability of tourism infrastructure</li> <li>• Inter and intra departmental co-ordination</li> <li>• Co-operation from the government for development of ecotourism</li> <li>• Amount of external and local funding generated for promoting ecotourism</li> <li>• Generation of local level funds for conservation and maintenance activities</li> <li>• No. of activities / schemes for ecotourism promotion</li> <li>• No. of tourism and conservation projects</li> </ul>	<ul style="list-style-type: none"> <li>• Records and discussions</li> <li>• Observation, interview, discussions, Records</li> <li>• Survey, Records, interview, photographs</li> <li>• Discussion, interview, records</li> <li>• Interview, interaction with staff</li> <li>• Records, interview</li> <li>• Records, interview</li> <li>• Records</li> <li>• Records, interview</li> </ul>

### 4. Criteria 4: Livelihood Generation and Poverty Alleviation

Improvement of the socio-economic condition of the local people is one of the major objectives of developing ecotourism, which can lead to sustainable development. In other word, it can be said a major constituent of the concept of ecotourism, without including this component any tourism

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can not be defined as ecotourism. The question, then, is how overlapping discourses of environment and sustainable development are translated into location-specific ecotourism practices that will invariably distributed power and benefits to specific groups. It can be only done diversifying the livelihood opportunities for local people. Whether these approaches are being practiced in existing ecotourism destination or not, can be only known by assessing “ *Whether ecotourism can actually meet local needs or contribute to a locally defined vision of development or not?* “. In case of Yuksam, this can be well answered by following indicators under the criterion Livelihood generation.

Criteria	Indicators	Monitoring Methods
Livelihood generation and Poverty alleviation	<ul style="list-style-type: none"> <li>No. of Ecotourism services providers</li> <li>Out-migration status</li> <li>No. of men and women entrepreneur</li> <li>No. of people involved in NTFP livelihood</li> <li>Amount of income from seasonal arrangement tourism work</li> <li>Equity in benefit sharing</li> <li>No. of people brought above poverty line due to ecotourism</li> </ul>	<ul style="list-style-type: none"> <li>Records, interviews</li> <li>Records, survey, interviews</li> <li>Records, survey, interviews</li> <li>Records, survey, interviews</li> <li>Survey, interview, records (payroll)</li> <li>Interview, observation, survey</li> <li>Records, survey, interviews</li> </ul>

## 5. Criteria 5: Tourist satisfaction

The picturesque landscape of Yuksam with snowcapped mountains, many pristine patches of forests good climate and the flora, fauna and avifauna attracts large number of the visitors and tourists. These recreational benefits from the forests reflect the appreciation and aesthetic value assigned to it. This criterion deals with assessing the level of tourist’s satisfaction with respect to tourist’s infrastructure, services and conservation status etc.

Criteria	Indicators	Monitoring Methods
Tourist satisfaction	<ul style="list-style-type: none"> <li>No. of tourist visits per year</li> <li>Tourists safety</li> <li>Repeat visits of tourists</li> <li>Feedback from tourists</li> <li>No. of complaints by tourists at tourism department, forest check posts and police outpost</li> <li>No. of different tourist products</li> <li>Quality of products</li> <li>No. of tourist reporting</li> <li>Duration of tourist stay</li> </ul>	<ul style="list-style-type: none"> <li>Books of Records, interview of ESPs</li> <li>Observations, interview, Police/Forest Department records</li> <li>Records, interview</li> <li>Visitor survey</li> <li>Records</li> <li>Interview with tourist</li> <li>Brochures, phamplets, reports, feedback, records</li> <li>Records</li> <li>Records, interview</li> </ul>



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## 6. Criteria 6: Carrying capacity

Determination of carrying capacity should be pre-requisite for the development of any ecotourism destination. Carrying capacity is the maximum number of tourists allowed to visit the destination without disturbing the integrity of the ecosystem. It helps in assessing the likely impact of visitors not only on focal species but total ecosystem. In other word the concept of carrying capacity is “*matching sensitivity analysis of various species with the potential impact analysis of visitation*”. Generally it has three main components physical, social and ecological.

Criteria	Indicators	Monitoring Methods
Carrying capacity (CC)	<ul style="list-style-type: none"> <li>• Availability of carrying capacity norms developed by local community</li> <li>• No. of trekkers hut in trekking route</li> <li>• Availability of cc norms in terms of ecological, financial, social, economic and visitors carrying capacity</li> <li>• Limits of acceptable change to critical tourism sites</li> <li>• Deterioration of floral and faunal habitat</li> <li>• Compliance of cc norms by tourism permit authority</li> <li>• Compliance of cc norms by the tour operator</li> </ul>	<ul style="list-style-type: none"> <li>• Records, interview</li> <li>• Transect, photo, survey</li> <li>• Records, interview</li> <li>• Observation, survey, photographs</li> <li>• Observation, survey, photographs</li> <li>• Interview, observation</li> <li>• Interview, observation</li> </ul>

## 7. Criteria 7: People participation and awareness generation

Ecotourism from a development perspective that considers not just total economic benefits for the community, but also how these benefits are distributed and the social and cultural effects of ecotourism development on local people. Now the question occurs that how the theoretical ideal of local involvement is translated into practice in a conservation – driven ecotourism project. Bringing environmental awareness and participation of the local people can do this. In case of Yuksam, generation of environmental awareness is the result of the previous “Sikkim biodiversity and Ecotourism Project”. And the participation of the local people in providing ecotourism services is the outcome of the project as well as constructive contribution by local institutions and an international NGO. The local Forest Department has initiated popular participation schemes in forestry activities through several committees. These committees are constituted as per the type of activities in which they are involved like Joint Forest Management Committees (JFMCs), Ecodevelopment Committees (EDCs) and Self-Help Groups (SHGS). In order to assess the level of participation following indicators has been given by the participants.

Criteria	Indicators	Monitoring Methods
Peoples participation and awareness generation	<ul style="list-style-type: none"> <li>• No. of home stays availability</li> <li>• No. of people involve</li> <li>• No. of people involve indirectly</li> </ul>	<ul style="list-style-type: none"> <li>• Record, survey</li> <li>• Record of payment,</li> <li>• Record of payment</li> </ul>

	<ul style="list-style-type: none"> <li>• No. of workshop / meeting / activity in a year</li> <li>• No. of women involved in JFMC/ EDC/SHG</li> <li>• No. of people gain new skills for better job</li> <li>• No. of people participating self/ co-financing training program</li> <li>• No. of people born within the community who have setup permanent residence for visiting tourist</li> </ul>	<ul style="list-style-type: none"> <li>• Records, reports, feedback, photographs</li> <li>• Records, reports, feedback, photographs</li> <li>• Employment records, interviews, participatory exercise, survey</li> <li>• Interview with employees, observation, survey</li> <li>• Records, interviews, participatory exercise, survey</li> </ul>
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Importance of C&I based monitoring method using local knowledge material is very transparent and important method but a time consuming affair. Unless local people understand the relevance and need they do not give their time and participation for the same. The indicators must be specific and time bound it requires stakeholder's participation. The field monitoring becomes easier when we involve people who are locally participating in ecotourism in routine manner.

For measuring the C7I in ecotourism, clarity in the objectives of each indicator is identified by local stakeholders must need to check with different groups as their important inputs. Indicators should be simple and above all measurable either qualitatively or quantitatively.

C&I should not be a fix kind after a few years of assessment with a set of C&I it may be relooked with the present context and policy environment atleast before ten years. The monitoring data should be presented and shared in most appropriate places for incorporating research results in the planning. Sharing information/results with local communities need to be adopted according to literacy level; they may fill ownership of the idea and information.

### **Comparative analysis between Yuksam and Peiling**

The present study compare Ecotourism situation of Yuksam and Peiling village of Sikkim. While in May 1996 participatory community based Eco-tourism planning was developed in Yuksam, mostly the local people participated and still they have been participating. Yuksam has served as the basis for future planning in development in Sikkim. The rhetoric of Yuksam Community Based Ecotourism (CBE) entirely relies on local people's participation. There is very less influence of outsiders in CBE and it is attributed to as much possible as local people's attitude and the dedication towards the CBE management. Due to the involvement and utilization of local community and local resources respectively on CBE there is less number of sophisticated hotels and lodges. The CBE is absent in Peiling and due to the pressure and influence of outsiders, very little local people's participation is noticed here.

The population density is more or less equal in both Yuksam and Peiling village and it was in average 2000 where there is more outsiders' influence in Peiling. The building structures have been controlled by local community at Yuksam and it can be made only up to three storied with regarding the local environmental situation where as at Peiling it can be made large and up to five storied only in regards to accrue more profit. It was not in local people's favor. There is more pressure of vehicles in Peiling and it is leading to adverse impacts to tourism. Due to the easily accessibility and no rules, it has more tourist flow (native) which may ultimately lead to threats on local resources.

Local people are spearheads of local resources. The involvement or need of local people in management have realized from every organizations for effective performance. They are the sole agents who are the limiting factors for influencing the projects / program's activities and developmental concerns. There is less negative impacts on resource especially in water, vegetation, forest, etc. in Yuksam due to local base Eco-tourism initiatives. The contrasting result has observed in Peiling where there is more pressure on resources due to Eco-tourism Table 16. Overall at Yuksam, there is a 15% increase in the involvement of the local people in tourism business.

Parameters	Present situation	
	Yuksam	Peiling
1. Number of hotels	9 ( 90 rooms / 190 beds)	75 (500 rooms / 1100 bed)
• Ownership	100% (Local) No outsider	25% (Local) 75% Outsider
2. Population	1850	2000
• Local	1200	1200
• Outsider	650	800
3. Regulation of tourism environment		
• Hotel building	Up to 3 storied	Upto 5 stories
• Villagers code of conduct for house building	Limit up to 3 story	No such code of conduct
• Code of conduct application	For tourist as well as for stakeholders	No code of conduct
• Success stories	Caught one bio-piracy case	No such evidence
4. Resources situation		
• Availability of water	Available	Scarce
• Fuel wood	Available	Scarce
• Vegetation in the surrounding	Regeneration taking place	Degradation started
5. Number of Vehicle	27	More than 100
• Petrol	08	20%
• Diesel	19	80%
• Parking space	Plenty	Scarce
6. Number of tourist	5500	10000
• Local	3000	8000
• International	2500	2000
7. Cleanliness in the surroundings		
• Garbage management	Daily monitoring for garbage and its disposal	No such type of provision
• Sanitation	Good sanitation	Poor sanitation

After the implementations of CBE in Sikkim, there is considerable increase in local people's economic condition. Now the people who are involved in tourism business are getting more benefits than other sectors. They are getting as much as twice wages in compare to what they got under previous condition. Local people's annual income has been increased by 20% and the derived benefits are being distributed equitably following the transparent mechanism to all. Besides the socio-economic transformation due to CBE in both the study villages. There are

more Ecological changes have been happened. Now all local people are aware to their natural resource wealth and their importance. They are creating and managing Eco-friendly atmosphere in favor of both tourist and local people. It has offered various tangible and intangible benefits to local people.

#### Impact of Eco-tourism and natural resources conservation of village institution at Yuksam

Situation before Eco-tourism (< 1995)	Situation after Eco-tourism (> 1995)
10% involvement of the local people in tourism business	25% involvement of the local people in tourism business
No much increase in the income	20% increase in the income
Benefit to only few in the village	Benefits to nearly all stake holders
Direct and indirect benefits were less	Direct benefit to porters, guides, trekkers, hoteliers, taxi drivers, cooks etc. Indirect benefit to FD, Environment conservation, Aesthetic value increases, Biodiversity lovers, vegetable grower / farmers
Guides rate was Rs. 125/ day *	Present rated are Rs. 200-300 / day
Cooks rate was Rs. 100/day	Present rates are Rs. 175-200 / day
Awareness of natural resources was low	Awareness of natural resources is high and appreciates local environmental problem
No particular training to Guide, Cooks, Potters, Pack animal, hoteliers, tour operators, lodge operators.	Training about garbage management, cooking site selection, about flora and fauna, tent pitching, trekking route developed.
No code of conduct for trek	A systematic code of conduct for Eco-friendly trek is developed and followed.

\* USD 1 = INR 44/-

#### SWOT ANALYSIS of Factors Related to Promotion of Ecotourism in Yuksam

Taking into account background information of Yuksam as well as public opinion, internal resources and the remaining factors discussed throughout this chapter, SWOT (Strengths, Weakness, Opportunities, Threats) analysis has been Promotion of Ecotourism in Yuksam. In analysis of the Strengths, Weaknesses, Opportunities and Threats for each enterprise the following themes emerged:

##### Strengths

- ❑ Yuksam is established ecotourism site endowed with variety of natural attractions like proximity with third highest peak of the world **Kanchendzonga**, rich floras fauna, Wild life and variety of birds and butterfly and Alpine flowers.
- ❑ The community strongly supports the idea of developing ecotourism in the region.
- ❑ Support exists from many funding organizations like Mac Arthur Foundation, Ministry of Forests and Environment etc.
- ❑ Status of biosphere Reserve
- ❑ Inflow of foreign as they find its natural and cultural resources attractive.
- ❑ Many individuals in the community are ready to provide a diversity of tourist services.
- ❑ Community based NGO **Kanchendzonga Conservation Committee** is working for development of ecotourism and conservation of natural resources through skill development program for ESPs (ecotourism Service Providers), Micro Planning for community level development and advocacy with the government.
- ❑ As a result of previous Ecotourism project the community possesses levels of Environmental Awareness which can help in implementation of environmental friendly activities.
- ❑ Strong Panchayat system and upcoming JFM committees, which can help in resource mobilization.

- ❑ Important place in Sikkim's history as Sikkim's first capital
- ❑ Inheritance of oldest monastery "Dubdi" and First coronation ground in the form of Norbugang Chorten
- ❑ Availability of Tourists infrastructure and other facilities like community information Centre, Forest and tourism check post, police outpost etc.
- ❑ Good handicraft items are made in **Tahoka Village**

### **Weaknesses**

- ❑ No maintenance of existing tourism infrastructure facilitated by government like the condition of trekking hut, trail route, non-functioning of Solar Panel etc.
- ❑ The access road leading to Yuksam is poor.
- ❑ Less co-ordination among the local community.
- ❑ Less enterprising nature of local community
- ❑ Residents of the community lack the training necessary to provide for tourists.
- ❑ Foreigners require a higher quality of services than is currently available in Rio Negro.
- ❑ Poor communication (telephone line) with the outside world.
- ❑ There is a lack of emergency medical services.
- ❑ Lack of Co-ordination between tourism and forest department
- ❑ Improper infrastructure along the trekking route and lack of safety provisions for tourists, porters, guide, yak man etc in the trekking corridor

### **Opportunities**

- ❑ Social mobilization through JFMCs, SHGs EDCs etc
- ❑ Existence of skills or knowledge in the local community, e.g. knowledge about herbal medicine
- ❑ Proper documentation of History of Yuksam, like Dubdi Monasteries, Norbugang Chorten, old Place and First Coronation Ground can help in promoting religious tourism
- ❑ Existences of multi ethnic groups like Bhutia, Subba, Gurung etc.
- ❑ Development of and diversification of Ecotourism Product will attract new clientele
- ❑ Cellular phone reception is great, giving a relatively inexpensive, and instant solution to improving communication
- ❑ Promotion of Ecotourism will provide economic growth in side the region
- ❑ Providing training of developing community based ecotourism like APPA (appreciative Participatory Planning and Action) the community of other village, which can help in ecotourism development in other part of State.

### **Threats**

- ❑ Immigration of people from outside to Yuksam and nearby villages due to many job opportunities
- ❑ Potential negative environmental impacts (damage to vegetation on trekking corridor, pollution by sewage, dumping of the garbage on trekking trail etc.)
- ❑ Influx of tourists (beyond the carrying capacity of the area)
- ❑ Increase in biotic pressure due to increase in tourism
- ❑ Lack of management can cause negative impact on environment
- ❑ Negative impact on Socio-culture life of the people

On the basis of above SWOT analysis, following conclusion has been drawn for promotion of ecotourism in Yuksam and other part of state.

### **Emerging Issues**

Based on the empirical evidences from the field, there are 4 emerging issues that have been thrown up. These issues are as follows –

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### *1. Ecotourism versus local development*

Ecotourism has every threat to wipe out plant and wildlife species and entire ecosystems to replace them by completely artificial landscapes. There are some efforts of so-called conservation cum tourism projects in order to make their environmental protection strategies attractive to international funding sources. Tourism related employment has been greatly over rated and local are usually left with low paying service jobs like tour guide, hotel waiters, porters, food and souvenir vendors. Skill development to local inhabitants is very important agenda in the development. It has to be assured the year round employment through several activities.

### *2. Globalization*

In the study area the inflow of foreign tourists has increased but the further impact may increase luxury hotels, shopping centers and fun plaza may increasingly be established in the name of eco-tourism. The efforts of bilateral and multilateral development agencies such as USAID, UNDP, UNEP and financial institutions like the World Bank, all of which are significantly involved in influencing ecotourism agendas, are directed towards making Third World countries compliant though homogenization of policies and standards. Examples are the structural Adjustment programmes and the liberalization of trade and services through the General Agreement on Trade and Tariffs (GATT), which increasingly undermine economic and social progress in Third World countries and result in more destruction of cultural and ecological diversity (Anita, Undated).

### *3. Cultural Erosion*

In the ecotourism concept, planners have put high provisions for involvement of local communities or peoples participation agenda so it is pertinent to keep a close eye on the cultural promotion not about introduction of alien culture. The number of locals who can participate in tourism project was experienced relatively small and in many cases relatively diverse social and economic activities are replaced by an ecotourism “ monoculture” which thus may cause losses and leaving little choices for communities.

### *4. Ecotourism Policy*

The concept of ecotourism covers several cross-cutting themes like poverty alleviation, coordination among different stakeholders, including larger participation of local community. It also highlights conservation of natural resources and local culture with efficiency that means improvement of local economic status without future deterioration of the local environment.

Ecotourism policies, inspired by the 1987 Brundtland Report “Our Common Future” and later by the 1992 United Nations Conference on Environment and Development (UNCED), and their attempt at redefining development through “sustainability” and ‘justice’ have been opposed due to the introduction of a dubious and false linkage between development and conservation. As such, they assist in concealing the actual dichotomy between ecological development and unsustainable economic growth (Harrison 1995).

### **Conclusion:**

The concept of Eco-tourism is new to Sikkim, however it is very popular due to efforts taken by government and the NGOs like KCC, SPSS, ECOSS, SDF etc. With the help and efforts of Yuksam based NGO KCC, the stakeholders of village Yuksam are benefiting more by Eco-tourism than earlier. They put good example to Sikkimese hence, the concept of Eco-tourism in popularizing in Sikkim. The people they now understand the importance of their natural resources. They know that, if they want to earn the money from tourism, they have to conserve and protect their natural resources sustainably.

In the ecotourism concept it is often highlighted that it provides cooperation between the industry, governments, local communities and NGOs, for successful planning and implementation of ecotourism. In the case study area all the stakeholders are present fortunately but Ecotourism Service Providers shows great divergent interest and motives. The concept of sustainable ecotourism is possible and can be achieved with all concerned institutions and their ethical values intact, while in reality, tourism development continues to rest with the narrow economic interest of powerful institutions (e.g. hoteliers), just in case of Peiling area. Where as in Yuksam area on the contrary to cultural and ecological sensibilities of local communities are high.

There are a lot of initiatives and thrust in the third world countries for development of ecotourism as a possible potential/opportunity for poverty alleviation and income generation as component in environmental and biodiversity projects. It sometimes deliberately directed towards the removal of all barriers to travel including physical, economic, social and legal barriers.

Presently in this age of globalization there is indeed a strong case for governments in developing countries to scrutinize tourism activities, organize workshop and public debate to check types of developmental activities. People should be involved in each steps of project, which may safeguard local resources and culture. Participatory research and holistic case studies on local impact of ecotourism can help governments to design projects and policies.

Other than local communities the government and international agencies play a very important role for promotion as well as demotion of any initiative. Civil societies needs to be more responsible for sustainable ecotourism to safeguard public lands, protected forests, water bodies, violation of local and indigenous customary rights.

Development of Criteria and Indicators is just a beginning, its regular monitoring and need based implementation of activity is very crucial and for this work local community can play a very crucial role. Provincial and federal governments also should be sensible by recognizing the contribution of people

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